

**State of Washington  
Decision Package**

<b>Agency:</b>	<b>310</b>	<b>Department of Corrections</b>
<b>Decision Package Code/Title:</b>	<b>AE</b>	<b>Accessibility of Offender Data</b>

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**Budget Period:** 2007-2009

**Budget Level:** M2 – Inflation and Other Rate Changes

**Recommendation Summary Text:**

The Department requests funding to enhance mandatory technology infrastructure to ensure offender management systems are stable, secure, and accessible by Department staff and criminal justice partners.

**Agency Total**

<b><u>Fiscal Detail</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Total</u></b>
<b>Operating Expenditures</b>			
001-1 - General Fund - Basic Account-State	\$4,027,000	\$1,522,000	\$5,549,000
<b>Staffing</b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Annual Average</u></b>
FTEs	N/A	N/A	N/A

**Program 100-Administration and Program Support**

<b><u>Fiscal Detail</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Total</u></b>
<b>Operating Expenditures</b>			
001-1 - General Fund - Basic Account-State	\$1,263,000	\$262,000	\$1,525,000
<b>Staffing</b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Annual Average</u></b>
FTEs	N/A	N/A	N/A

**Program 200-Institutional Services**

<b><u>Fiscal Detail</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Total</u></b>
<b>Operating Expenditures</b>			
001-1 - General Fund - Basic Account-State	\$1,450,000	\$448,000	\$1,898,000
<b>Staffing</b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Annual Average</u></b>
FTEs	N/A	N/A	N/A

## **Program 300-Community Corrections**

<b><u>Fiscal Detail</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Total</u></b>
<b>Operating Expenditures</b>			
001-1 - General Fund - Basic Account-State	\$738,000	\$236,000	\$974,000
<b>Staffing</b>			<b>Annual</b>
FTEs	<b><u>FY 2008</u></b> N/A	<b><u>FY 2009</u></b> N/A	<b><u>Average</u></b> N/A

## **Program 600-Interagency Payments**

<b><u>Fiscal Detail</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Total</u></b>
<b>Operating Expenditures</b>			
001-1 - General Fund - Basic Account-State	\$576,000	\$576,000	\$1,152,000
<b>Staffing</b>			<b>Annual</b>
FTEs	<b><u>FY 2008</u></b> N/A	<b><u>FY 2009</u></b> N/A	<b><u>Average</u></b> N/A

### **Package Description**

Technology infrastructure is the mandatory foundation or substructure that delivers all technology investments (applications and services) to the customer. With technology, agencies rely on stable, responsive, and robust networks and infrastructure to transport data and deliver applications and services to their users and stakeholders. These assets are not one-time expenses but on-going costs of doing business. These mandatory assets require on-going funding to continue stable operations, and investments to enhance service delivery and protect the asset.

In the Department of Corrections, technology infrastructure includes the following components:

- Wide area network (WAN) hardware and software to interconnect prisons, offices, and users with the use of routers, switches, data circuits and remote/wireless equipment;
- Enterprise network services to deliver stable and secure services including: central web and application services, data storage, and other services, such as, database administration, data backup/recovery, virus protection, and patch management;
- Mainframe application delivery and data storage;
- Local area network (LAN) including local switches, local servers; and fiber and copper wiring.

In past biennia, the Department made moderate investments in its technology infrastructure. During the 2005-2007 Biennium, the Department:

- Migrated its data circuits to the new Department Information Services Multi-Protocol Label Switching (MPLS) data network;
- Invested in file and print servers for remaining remote field sites without existing servers;
- Upgraded data circuits at selected remote field sites that suffered from slow, unresponsive connections.

Despite these investments, the Department continues to lag behind technology; thus diminishing its ability to provide stable, secure and accessible services. During the 2007-2009 Biennium, the Department requests funding to cover costs associated in completing the following planned technology infrastructure enhancements:

- Improve application delivery and performance;
- Protect critical systems for data storage and backup/recovery
- Maintain access to critical offender data systems
- Sustain stable, secure remote access
- Sustain increased costs of DIS circuits

Non-funding will affect the Department's ability to carryout its mission and critical business objectives. The inability to access offender management systems, data or applications hinders the Department's ability to achieve greater efficiencies and consistency of services, and affect the safety of staff, offenders and the public.

### **PLANNED TECHNOLOGY INFRASTRUCTURE ENHANCEMENTS**

#### **Improve Application Delivery and Performance** **\$2,144,000**

The Department requests funds to enhance its existing network infrastructure asset to ensure stable application delivery and adequate performance of offender management systems.

Current network utilization at most remote field sites is often congested resulting in slow, unresponsive application and data delivery. Over utilized and congested networks translate into slow application response times, degraded application performance; thus affecting staff's ability to complete their work assignments in an effective and efficient fashion. The Department has upgraded the connection speed to many of its remote field sites and will continue to upgrade selected sites as required to provide basic services. Although these upgrades have resulted in some improvements, they have not provided sufficient improvements to meet current and future application and data needs to support business requirements. The Department plans to improve utilization and performance of its network using compression technology. This compression technology, consisting primarily of hardware, and is attached at each network end. The hardware compresses and caches repetitive data at each remote site; so recurring data only has to be sent once through the network. This technology thus has the potential to significantly reduce the amount of data being transported across the network and improve network performance. The Department plans to deploy this compression technology in a phased approach; first deploying to remote sites that could most benefit from this technology based on network congestion and slow response times. All 120 remote field sites will be deployed in during Fiscal Year 2008.

#### **Maintain Access to Critical Offender Data Systems** **\$570,000**

The Department requests funds to purchase DL2 software required to access offender data systems stored on the DIS mainframe.

The Department is currently developing a replacement for the outdated Offender Based Tracking System (OBTS) system. Due to fiscal and project constraints, the replacement of the outdated OBTS system has transitioned into extended phases. These extended phases require the Department to maintain a mainframe software solution that redirects OBTS application data requests to the new database location. This DL2 software solution is required until the decommissioning of OBTS or until remaining OBTS applications are rewritten to point to the new database.

In past biennia, the Department has leased this software on an annual basis from the vendor. Starting Fiscal Year 2008, the vendor will no longer offer a lease option; thus forcing the Department to purchase this DL2 software solution. No other options are available to the Department.

**Protect Critical Systems for Data Storage and Backup/Recovery** **\$1,617,000**

The Department requests funding to cover costs associated with providing data storage, and backup of critical data at current service levels. This request is due to:

- Expanding storage requirements for offender data and other critical applications;
- Reducing the risk of data loss or system failure due to exceeding known capacity thresholds;
- Replacing end-of-life equipment not supported by the vendor.

The Department centrally stores and manages some of its offender and critical business data from server-based applications rather than mainframe-based applications. Although a majority of offender data is stored on mainframes managed by DIS, data associated with non-mainframe applications, such as Offender Release Plan, Graphically Enhanced Network Information Exchange (GENIE), Offender Trust Accounting, Offender Pharmacy, Liberty Electronic Document System and the Department's Exchange Email system is stored on the Department's owned and operated servers.

**Data Storage**

The Department requests funding to replace the current Storage Area Network (SAN) used to store critical offender and business data. The equipment has served its useful life, is beyond the original warranty and is scheduled for replacement during Fiscal year 2009. This request also provides for additional storage capacity based on storage forecasts. The one-time cost of less than \$750,000 provides for up to twenty terabytes of storage and a useful life of five years.

**Backup/Recovery**

The Department requests \$675,000 of one-time funding to replace the existing backup system used to secure and restore critical data stored on enterprise servers including the aforementioned Storage Area Network (SAN) in the event of hardware failure, data corruption, or loss of data. The equipment supports the backup and recovery for all enterprise server-based applications and ensures the data is available. The current backup system is projected to reach capacity in Fiscal Year 2008.

The equipment has served its useful life and will no longer be supported by the vendor January 2009. To ensure stable operations, the replacement of this equipment is necessary prior to the December 2008. Unsupported equipment by the vendor means long recovery times in an emergency when there is a need to recover data. The Department has experienced a case where the hardware failed and DOC staff was unable to correct the problem without vendor support. This resulted in four days without a backup system. Outages, such as this, increase the risk of data loss and can severely impact Department operations.

**Sustain Stable, Secure Remote Access** **\$426,000**

The Department requests funding to cover costs of providing existing remote and wireless connections to access critical offender management applications and data.

The Department plans to replace its existing modem-based dial-up service with a virtual private network (VPN) solution and expand its existing wireless service for remote users. Without these replacements, field staff that once depended on traditional dial-up modem technology for access will not be able to access DOC networks and offender management applications due to slow connection speeds.

This request provides ongoing funds to be carried forward into future biennia at the requested amount. This request assumes a \$15.00 monthly per person cost to DIS for a secondary authentication device required by DIS for security. Without ongoing funds, the Department will no longer be able to sustain these services; thus leaving community corrections officers, staff assigned at out-of-state prisons, and staff located at remote sites without a way to access critical applications and data.

**DIS Circuit Increases**

**\$792,000**

The Department requests additional \$396,000 per year to cover cost increases to maintain network capacity at current service levels. This additional funding is required to cover increased costs associated with the recent migration to the DIS enterprise network.

Fiscal Year 2008 estimated allotments	\$911,000
DIS estimated Billing for Fiscal Year 2008	\$1,307,000
Fiscal Year 2008 Shortfall	\$396,000
Estimated Biennial Shortfall	\$792,000

**Narrative Justification and Impact Statement**

**How contributes to strategic plan:**

The request ensures that the Department has the necessary resources to maintain current levels of service and performance.

This request is required to sustain the agency activities: *Confine Convicted Adults in State Prisons, Health Care Services for Adults in State Prisons, Supervise Adult Offenders in the Community, Core Administration, and Re-Entry Services for Adult Offenders*. The resources identified will be directed to support the agency objectives to meet the business administration needs of the agency and protect staff. The strategies are to deploy new business practices and technology systems and maintain safe work environments for staff. These objectives and strategies move the Department closer to meeting its high-level organizational goal to meet the business practices and technology systems. This high-level goal is an intermediate outcome and helps achieve statewide results that improve the safety of people and property.

**Performance Measure Detail**

No measures were submitted for this package.

**Reason for change:**

Until the mid-1990's, desktop and network technology was fairly stable. Most business systems, such as offender management systems, were built on large mainframes that required little if any interaction at the desktop. All processing of information was done on mainframes, with over-night batch jobs producing paper reports that were mainly distributed. Networks between office and other agencies were limited to being able to access only the mainframe systems; data being the only thing passed along the wire.

With the advent of office automation, modern business applications, as well as systems that processed data at the desktop, agencies were able to begin to build systems that shared data between agencies and with external stakeholders. This evolution from a mainframe environment with dumb terminals to more sophisticated, interacting systems has dramatically increased the need for robust, stable and secure technology infrastructure for application and service delivery.

The cost of technology infrastructure has increased, but so has the overall benefit to state government and to the public. The efficiencies that agencies, like the Department of Corrections, have realized through automation have allowed them to do more with less. Reductions in funding and staff have not, in most cases, resulted in a reduction in services to the public. In fact, in the past few years, new services to the public have significantly increased much more rapidly than ever before. The rapid change has been driven by and made possible by the advances in desktop and network computing.

The Department must maintain and make future investments in technology infrastructure assets to ensure staff, in support of the Department's mission, objectives, and business processes, can access offender management systems and data in a stable, predictable, and responsive way. Additionally, the Department plans to continue to enhance its technology infrastructure to prepare for and take advantage of the convergence of unified communications, such as DIS service offering to provide voice communication services (Voice over IP) to state agencies over existing network infrastructure.

Non-funding will affect the Department's ability to carry out its mission and critical business objectives. This will translate in the Department continuing to lag behind technology, missing opportunities for data sharing with other criminal justice partners, and increasing risks of security breaches and/or data loss. Inability to access offender management systems, data or applications hinders the Department to achieve greater efficiencies and consistency of services, may affect the safety of staff, offenders and the public.

#### Improve Application Delivery and Performance

Network infrastructure enhancements are necessary to ensure stable application delivery and performance of offender management data and applications. Current network congestion and slow performance must be corrected to ensure acceptable response times for users. The Department plans to deploy network compression technology to optimize network traffic. The Department plans to deploy this compression technology in a phased approach; first deploying to remote sites that could most benefit from this technology. This request provides funding to deploy compression technology at all remote field sites with an existing network connection.

#### Maintain Access to Critical Offender Data Systems

The request provides funding to purchase on the mainframe DL2 software solution necessary to provide data access for existing OBTS functionality. In past biennia, the Department has leased this software on an annual basis from the vendor. Starting Fiscal Year 2008, the vendor will no longer offer a lease option; thus forcing the Department to purchase this software solution. There are no other options available to the Department.

#### Protect Critical Systems for Data Storage and Backup/Recovery

The Department plans to replace equipment associated with the storage and backup of critical data. This equipment is reaching its end of life, does not provide enough capacity to meet business storage needs, and vendor support will be discontinued during the biennium.

#### Sustain Stable, Secure Remote Access

The Department requests funding to sustain costs of providing stable, secure remote and wireless connections to access critical offender management applications by field staff.

#### DIS Circuit Increases

The Department requests funding to cover cost increases to maintain network capacity at current service levels. The Department is requesting additional funds to cover cost increases as a result of the migration onto the DIS MPLS network.

**Impact on clients and services:**

Funding the requested planned investments for technology infrastructure enhancements ensure the Department's ability to maintain current service levels, and provide a robust, stable, and secure computing environment for application delivery of mission critical offender data systems used for the management and supervision of offenders under the Department's jurisdiction.

**Impact on other state programs:**

Funding will ensure that criminal justice partners will continue to have necessary access to the Department's computer applications and offender data.

**Relationship to capital budget:**

N/A

**Required changes to existing RCW, WAC, contract, or plan:**

N/A

**Alternatives explored by agency:**

**Improve Application Delivery and Performance**

The Department has reviewed other technology alternatives; however, this compression technology solution offers the best performance gains for the price and is compatible with the Department's network infrastructure design, architecture and equipment; thus lessening the risk and impacts to the existing network.

**Maintain Access to Critical Offender Data Systems**

Starting Fiscal Year 2008, the vendor will no longer offer a lease option; thus forcing the Department to purchase this DL2 software solution. There are no other options available to the Department.

**Protect Critical Systems for Data Storage and Backup/Recovery**

The requested equipment replaces the current storage and backup systems. Other alternatives will require the Department to re-purchase other associated components and software; create a steep training and learning curve for support staff and increase the overall costs of this request.

**Sustain Stable, Secure Remote Access**

The Department has reviewed adding more capacity by replacing dial-up with new circuits. This option will significantly increase the ongoing cost of the network. Per site start-up costs range from \$10,000 to \$12,000 for equipment and installation and cost approximately \$400 to \$1,200 per month depending on location. This upgrade would be required at 35 sites for an initial startup investment of up to \$420,000 and \$504,000 per year in monthly service charges.

**DIS Circuit Increases**

None. The Department is required to pay the cost increases for these services.

**Budget impacts in future biennia:**

**Improve Application Delivery and Performance**

The Department requests \$73,000 per year to cover support and maintenance costs associated with compression hardware. The Department plans to deploy this compression technology in all sites by the end of Fiscal Year 2008. The Department will submit a funding request in future biennia to cover replacement costs at the end of its useful life.

#### Maintain Access to Critical Offender Data Systems

This request includes an annual cost of \$35,000 for software maintenance.

#### Protect Critical Systems for Data Storage and Backup/Recovery

The Department requests \$130,000 to cover support and maintenance costs associated with storage area network and enterprise tape backup system and software. The Department will submit a funding request in future biennia to cover the cost of equipment replacement at the end of its useful life.

#### Sustain Stable, Secure Remote Access

The Department is requesting annual funding of \$213,000 to cover DIS charges, maintenance, and ongoing circuit charges.

#### DIS Circuit Increases

The Department requests a funding of \$396,000 per year to maintain network capacity at established service levels. An additional funding is required to cover cost increases resulting from the migration onto the DIS MPLS network.

#### **Distinction between one-time and ongoing costs:**

##### Improve Application Delivery and Performance

This request provides one-time funding of \$1,998,000 for equipment, contracted services, installation and training and funding of \$73,000 per year for hardware maintenance. This request provides funding to deploy compression technology at all remote field sites with an existing network connection.

##### Maintain Access to Critical Offender Data Systems

This request provides funding for one-time expenditure of \$500,000 and ongoing annual maintenance cost of \$35,000 starting at the time of purchase and annually thereafter.

##### Protect Critical Systems for Data Storage and Backup/Recovery

This request provides for one-time expenditures of \$1,421,000 to cover hardware costs, installation, training, maintenance, warranties, and supplies. An additional \$196,000 per year is required to cover support and maintenance costs associated with the storage area network and enterprise tape backup system.

##### Sustain Stable, Secure Remote Access

The Department requests funding of \$213,000 annually to continue covering DIS charges for secondary authentication devices, maintenance, ongoing circuit charges.

##### DIS Circuit Increases

This request provides ongoing funding of \$396,000 per year to cover cost increases as a result the Department's migration onto the DIS MPLS network.

#### **Effects of non-funding:**

##### Improve Application Delivery and Performance

Funding is necessary to provide stable, responsive application delivery for offender management systems and access to critical data. Non-funding will degrade the performance and use of critical business



systems. This may lead to offender management applications not being accessible by many users due to slow network speeds and congestion.

#### Maintain Access to Critical Offender Data Systems

Non-funding is not an option available to the Department. This DL2 software solution is required until the decommissioning of OBTS or until remaining OBTS applications are rewritten to point to the new database. Not funding this decision package will require the Department to reprioritize remaining resources. Re-prioritizing resources will reduce current levels of service and will likely put the Department and communities at greater risk.

#### Protect Critical Systems for Data Storage and Backup/Recovery

Without funding for storage, the Department will be forced to prioritize space allocated for applications. This will leave mission critical applications with inadequate storage space for data storage. Without funding for backup, the Department's ability to secure and recover from hardware failure, data corruption or loss of data may be severely affected. Unsupported equipment by the vendor will translate in longer recovery times in an emergency when there is a need to recover data. Hardware failures, while not covered under warranty, will have significant impacts on the Department. These systems provide storage and data protection for: Offender Release Plan, Graphically Enhanced Network Information Exchange (GENIE), Offender Trust Accounting, Offender Pharmacy, Liberty Electronic Document System and the Department's Exchange Email system. Outages will affect the Department's ability to:

- Create and maintain offender release plans;
- Maintain and manage offender caseloads while under community supervision;
- Operate offender visiting programs and maintain visit records;
- Conduct timely community violator hearings of per the Offender Accountability Act (OAA);
- Maintain and retrieve offender records and documents stored in Liberty electronic document system;
- Utilize kiosk check-in of offenders while assigned to community supervision and work release facilities;
- Operate offender stores and process all offender trust accounting transactions;
- Maintain, process and dispense pharmacy prescriptions and other prescribed items to offenders in prison;
- Utilize offender self-service information kiosks that provide approved visitor lists, trust account information, as well as a means of communication between the offender and staff;
- Communicate via email both internally within the Department as well as to other state agencies, criminal justice partners, and the public.

Non-funding would increase the risk to the Department should this equipment fail without support, maintenance or warranty. Equipment failure or outages would significantly impact Department's business processes and operations and its ability to provide current service levels.

#### Sustain Stable, Secure Remote Access

Funding is required to sustain stable, reliable remote access to mission critical applications and data. Not funding this investment will require the Department to either reduce service levels or be forced to reprioritize remaining resources.

#### DIS Circuit Increases

Not funding network upgrades will significantly impact the response time and use of offender management systems for remote users in the field and institutions. Without funding, the Department would be required to reduce current levels of service to fund these changes.

***Expenditure Calculations and Assumptions:***

- Expenditure calculations are based on purchase replacement costs of similar equipment available on the current market at current prices.

<b><u>Object Detail</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>Total</u></b>
E Goods and Services	1,396,000	887,000	2,283,000
J Capital Outlays	2,467,000	635,000	3,102,000
C Contracted Services	144,000	0	144,000
G Travel	20,000	0	20,000
<b>Total</b>	<b>4,027,000</b>	<b>1,522,000</b>	<b>5,549,000</b>